

REMARKS

Claims 1, 5, and 9-10 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 and 5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 2000-243254 (JP '254). This rejection is respectfully traversed.

Claim 1 is amended to recite:

1. A method for manufacturing electron emitters by providing pairs of element electrodes, and conductive layers connecting the element electrodes to each other on a substrate, the method comprising:

a step of forming banks surrounding electrode-forming regions for forming the element electrodes and conductive-layer forming regions for forming the conductive layers;

a step of lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the banks formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the banks;

lyophobing the banks using a CF₄ plasma process, the step of lyophobing the banks introducing fluorine groups into the banks;

a step of discharging first droplets toward the electrode-forming regions;

a step of discharging second droplets toward the conductive-layer forming regions; and

a step of removing the banks;

wherein the banks consist of protrusion portions which function as partitions.

Support for the amendments to claim 1 may be found in, for example, paragraphs [0067] to [0076]. No new matter is added.

JP '254 does not anticipate the claimed method. At a minimum, JP '254 fails to disclose "lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process" and "lyophobing the banks using a CF₄ plasma process." Because these steps of the claimed method are not disclosed by JP '254, the method defined by claim 1 is not anticipated.

Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 2, 3, 9, 10, 13, 14, 15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 2000-243254 (JP '254) in view of Yudasaka (U.S. Pat. No. 6,476,988). This rejection is respectfully traversed.

Claims 2, 3, 13-15 and 17 are cancelled. The rejection of these claims, therefore, is moot.

Claim 9 is amended to recite:

9. A method for manufacturing an electron emitter comprising:
defining a pair of spaced apart electrode-forming regions on a substrate;
defining a conductive layer-forming region on the substrate, the conductive layer-forming region interconnecting the electrode-forming regions;
forming a bank encircling the electrode-forming regions and the conductive layer-forming region;
lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the bank formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the bank;
rendering the bank lyophobic using a CF₄ plasma process, the step of rendering the bank lyophobic introducing fluorine groups into the bank;

discharging first droplets toward the electrode-forming regions to form a pair of element electrodes;

discharging second droplets toward the conductive layer-forming regions to form a conductive layer connecting the element electrodes to each other; and

removing the bank after the conductive layer and element electrodes are formed,

wherein the bank consists of protrusion portions which function as partitions.

Support for the amendments to claim 9 may be found in, for example, paragraphs [0067] to [0076]. No new matter is added.

The combination of JP '254 and Yudasaka does not yield the method of claim 9. At a minimum, the proposed combination fails to yield the claimed step of "rendering the bank lyophobic using a CF₄ plasma process, the step of rendering the bank lyophobic introducing fluorine groups into the bank." In contrast, Yudasaka teaches using ultraviolet light. See column 1, lines 56-63 of Yudasaka. Such a process fails to introduce fluorine groups into a bank, as claimed. Because this feature of the claimed method is neither taught nor suggested by the proposed combination of JP '254 and Yudasaka, the claimed method would not have been obvious.

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 2000-243254 (JP "254) in view of Morii (U.S. Pub. No. 2004/0242111). This rejection is respectfully traversed.

Claim 18 is cancelled. The rejection of claim 18, therefore, is moot.

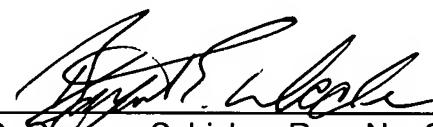
Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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